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10/781,284

02/18/2004

Floyd Backes

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34845 7590 12/27/2006  
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EXAMINER

FERRIS, DERRICK W

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

12/27/2006

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/781,284

Applicant(s)

BACKES ET AL.

Examiner

Derrick W. Ferris

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 6-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. This Office action is in response to applicant's paper filed 11/16/2006. **Claims 1-5** as amended are still in consideration for this application.
2. The examiner **withdraws** the claim objection to claim 3 and thanks applicant for making the necessary correction.
3. The examiner **withdraws** the double patenting rejection and thanks applicant for filing a terminal disclaimer.
4. Examiner **withdraws** the obviousness rejection to *English et al.* in view of *Lappetelainen* and in further view of *Wheatley, II et al.* The following comments fully address applicant's arguments with respect to the rejection. Upon further review of the Appeal Brief filed 11/16/2006, the new examiner for the case agrees with applicant(s) representative. In particular, the power attenuation as taught by *Wheatley III* is not in the same context as the recited limitation of using level of attenuation of signal strength of transmissions to evaluate an AP. Thus applicant's argument is persuasive and the rejection is withdrawn. However, the examiner disagrees with applicant that the further concept of TP backoff is recited in the claim (i.e. the TP Backoff value indicates how far from the maximum power the sending AP's radio had been turned down, see e.g. page 19 of applicant's specification). The examiner further disagrees that the claims recite evaluating a current AP with an alternative AP. The examiner furthermore notes that in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re*

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*Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). As such, upon further searching, the examiner notes that the above limitation at issue is well known in the art prior to applicant's invention. Hence, please find a new rejection as necessitated by applicant's amendment filed 8/2/2006. Thus the current rejection is made Final.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-5** are rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent Application Publication US 2003/0036374 by *English et al* in view of U.S. Patent No. 6,693,915 to *Lappetelainen et al.* in further view of U.S. Patent No. 5,845,212 A to *Tanaka*.

As to **claim 1**, *English* teaches an apparatus including a wireless device (e.g., mobile node 902a, see FIGS. 9 and 10) in a wireless communications environment including access points (e.g., 904a-904c) and stations (e.g., 902a-902b), wherein stations gain access by associating with one of the access points, comprising: logic for associating the wireless device with a current access point (e.g., paragraph 0170, particularly lines 9-17 regarding mobile node 902a associating with one of access points 904a or 904b); logic for ascertaining whether the wireless device should attempt to associate with an alternative access point (e.g., see paragraph 0170, particularly lines 9-18 regarding mobile node 902a makes the decision of which access point 904a or 904b to associate with); and logic for requesting associating with alternative access point (e.g., see

paragraph 0190 regarding handoff of communications to a new access point; see also generally paragraphs 0146-0181).

However, *English* may not specifically disclose the ascertaining is based at least in part on signal strengths of transmission from the current and alternative access points.

*Lappentelainen*, like *English*, also teaches stations gain network access by associating with one a plurality of access points (e.g., see col. 5, line 53 – col. 6, line 29 regarding access points AP1 and AP2 and corresponding communications), and further, specifically teaches ascertaining based at least in-part on the signal strength of transmissions from current and alternative access points (e.g., see col. 12, lines 21-26 regarding selection of access point having “the greatest signal strength” measured). Additionally, the teachings of *Lappetalainen* provide access point association devices and methods which increase the utilization ratio of each data transmission channel (e.g., see col. 5, lines 12-14) and reduce the interference to a level lower than conventional prior art systems (e.g., see col. 5, lines 15-18) without requiring complex algorithms (e.g., see col. 5, lines 18-20). Thus at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the access point association teachings of *Lappetalainen* to the access point association in the invention of *English* in order to provide an increase utilization ratio of each data stream transmission channel (e.g., see col. 5, lines 12-14) and reduce interference that is at a level lower than conventional prior art systems (e.g., see col. 5, lines 15-18), all without requiring complex algorithms (e.g., see col. 5, lines 18-20).

However, *English* in view of *Lappetelainen* may not specifically disclose ascertaining based on a level of attenuation of signal strength where the alternate access point transmits at less than full power. *Tanaka* teaches the above limitation at issue with respect to FIG. 1, labeled prior art, and FIG. 2. In particular, for FIG. 1 *Tanaka* teaches an alternative base station as base station 2b that controls the base transmit power to vary the base transmission power in accordance with the first measured information and that the base transmission power may not become a maximum power when the mobile station 1 carries out a mobile hand-off command (e.g., see col. 3, line 60 to col. 4, line 10). In addition, for FIG. 2 *Tanaka* teaches sending second control data that includes information which is representative of the transmission power of the second base station 12b (e.g., see col. 5, lines 44-65). Since the mobile station 11 controls the base station's power, the base station is not transmitting at maximum power which is why the power level is sent back to the mobile. Thus at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the access point association teachings of *Lappetelainen* and *English* to the access point association in the invention of *Tanaka* to in order to control the power at the base station. In particular, one skilled in the art would be motivated to make the above modification for the purpose of providing a hand-over. As such, *Tanaka* teaches the above motivation at e.g., column 1, lines 62-64.

Regarding **claim 2**, *English* teaches logic for automatically collecting information about alternative access points (e.g., see paragraph 0178 regarding mobile node 902 being informed about information regarding access points 904a, 904b and 904c; and also paragraphs 0076, 0100, 0141 and 0163 regarding channels). *Tanaka* also teaches logic

for automatically collecting information about alternative access points as received signal strength (e.g., see col. 3, line 37-67 and col. 5, line 42 – col. 6, line 35).

Regarding **claim 3**, *English* teaches logic for ascertaining that the wireless device should attempt to associate with the alternative access point if the alternative access point is closer than the current access point (e.g., see paragraphs 0170-0180 regarding mobile node 902 determining which access point to associate with based upon the proximity to the access points).

Regarding **claim 4**, *English* teaches calculating a first biased distance between the wireless device (e.g., mobile node 902) and the alternative access point on “x” samples (see e.g., paragraphs 0167-0168 and 0175 regarding the impulse ratio unit 1016 within mobile node 902 triangulating the current position of the mobile node 902, inherently comprising three or more samples); calculating a second biased distance between the wireless device alternative access points based on “y” samples (e.g., see paragraphs 0175-0180 regarding mobile node 902 estimating such a distance by comparing the current position of the mobile node 902 with a map generated in step 1104 of FIG. 11 which comprises the position of different access point such as 904b or 904c) where “y” (e.g., known position of mobile node 902 and known position of access point 904) is less than “x” (e.g., three or more samples for triangulating the current position of mobile node 902); and ascertaining that the alternative access point is closer than the current access point if the second biased distance is less than the first biased distance (e.g., see paragraphs 0164-0181, particularly paragraphs 0170 and 0175-0180 regarding mobile node 902 determining which access point to associated with).

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Regarding **claim 5**, *English* teaches requesting association by sending a message to the alternative access point (e.g., see paragraph 0171 regarding mobile node 902a deciding to associate with a different access point and handing off communications to the different access point after authenticating the different access point).

***Conclusion***

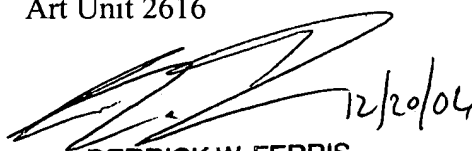
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571)272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
DWF

Derrick W. Ferris  
Examiner  
Art Unit 2616

  
12/20/04  
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PRIMARY PATENT EXAMINER